Listing of the Claims:

1. (Currently Amended) An apparatus for controlling an impact/pulse tool during a fastener tightening cycle comprising:

an inlet port for receiving a supply of pressurized fluid;

a fluid pressure regulator for maintaining a selectable pressure value to be delivered to the tool to be controlled in response to a control signal;

a sensor for measuring a characteristic corresponding to flow of the fluid to the tool to be controlled and for generating an output signal, wherein the characteristic corresponding to flow is at least one of differential pressure and acoustic data; and

a central processing unit for receiving the output signal from the sensor and for generating the control signal to be sent to the pressure regulator in response to the output signal from the sensor in accordance with a program stored in memory to control flow of fluid to the tool to be controlled.

2. (Original) The apparatus of claim 1, wherein the program further comprises a setup process for each fastener tightening cycle to be learned.

3. (Original) The apparatus of claim 2, wherein the setup process further comprises:

a transducer connectible between the tool to be controlled and the fastener to be tightened for generating a torque signal during a ramped pressure fastener tightening cycle; and

the central processing unit for receiving the torque signal from the transducer during the ramped pressure fastener tightening cycle, and for setting a fixed pressure value based on the received torque signal.

4. (Original) The apparatus of claim 2, wherein the setup process further comprises:

the central processing unit for receiving a torque value input by an operator using a manual torque wrench during a preset pressure fastener tightening cycle, and for setting a fixed pressure value based on the torque value input.

5. (Original) The apparatus of claim 2, wherein the setup process further comprises:

a transducer connectible between the tool to be controlled and the fastener to be tightened for generating a torque signal during the fastener tightening cycle at a fixed pressure value; and

the central processing unit for receiving the torque signal from the transducer during the fastener tightening cycle at a fixed pressure value, and for setting a fluid flow signature based on the output signal received from the sensor and the received torque signal.

6. (Original) The apparatus of claim 2, wherein the setup process further comprises:

the central processing unit for receiving the output signal from the sensor during a free air run process, and for setting a threshold value based on the received output signal.

7. (Original) The apparatus of claim 2, wherein the setup process further comprises:

the central processing unit for receiving the output signal from the sensor during a tightened fastener rehit cycle, and for setting a threshold value based on the received output signal.

8. (Original) The apparatus of claim 2, wherein the program further comprises a control program for each fastener tightening cycle to be performed.

9. (Original) The apparatus of claim 8, wherein the control program further comprises:

the central processing unit for receiving the output signal from the sensor during the fastener tightening cycle, and for comparing the output signal with bench marks stored in memory based on a previous fluid flow signature of an acceptable fastener tightening cycle for controlling fluid flow to the tool to be controlled.

10. (Original) The apparatus of claim 1, wherein the program further comprises an error proofing program for each fastener tightening cycle to be performed.

11. (Original) The apparatus of claim 10, wherein the error proofing program further comprises:

the central processing unit for receiving the output signal from the sensor during the fastener tightening cycle, and for comparing the output signal with bench marks stored in memory based on a previous fluid flow signature of an acceptable fastener tightening cycle for generating error proofing signals for the fastener tightening cycle based on the received output signal.

12. (Original) The apparatus of claim 1 further comprising:

an output port for supplying controlled fluid flow to the tool to be controlled through a standard fluid flow supply hose.

13. (Cancelled).

14. (Original) The apparatus of claim 1, wherein the pressurized fluid is compressed air.

15. (Original) The apparatus of claim 1 further comprising:

a switch operably connected to the central processing unit for running in a reverse cycle remote mode by electronically bypassing all internal metering for reverse cycle operation.

16. (Original) The apparatus of claim 1 further comprising:

a transducer connectible between the tool to be controlled and the fastener to be tightened and operably connectible to the central processing unit for running a setup process for a fastener tightening cycle to be learned.

17. (Currently Amended) A method for controlling an impact/pulse tool during a fastener tightening cycle comprising the steps of:

receiving a supply of pressurized fluid through an inlet port;

maintaining a selectable pressure value to be delivered to the tool to be controlled in response to a control signal with a fluid pressure regulator;

measuring a characteristic corresponding to flow of the fluid to the tool to be controlled with a sensor and generating an output signal, wherein the characteristic corresponding to flow is at least one of differential pressure and acoustic data; and

receiving the output signal from the sensor with a central processing unit and generating the control signal to be sent to the pressure regulator in response to the output signal from the sensor in accordance with a program stored in memory to control flow of fluid to the tool to be controlled.

18. (Original) The method of claim 17, wherein the program further comprises the step of running a setup process for each fastener tightening cycle to be learned.

19. (Original) The method of claim 18, wherein the setup process further comprises the steps of:

connecting a transducer between the tool to be controlled and the fastener to be tightened;

generating a torque signal during a ramped pressure fastener tightening cycle;

receiving the torque signal from the transducer with the central processing unit during the ramped pressure fastener tightening cycle; and

setting a fixed pressure value based on the received torque signal.

20. (Original) The method of claim 18, wherein the setup process further comprises the steps of:

receiving a torque value input by an operator using a manual torque wrench with the central processing unit during a preset pressure fastener tightening cycle; and

setting a fixed pressure value based on the torque value input.

21. (Original) The method of claim 18, wherein the setup process further comprises the steps of:

connecting a transducer between the tool to be controlled and the fastener to be tightened;

generating a torque signal during the fastener tightening cycle at a fixed pressure value; and

receiving the torque signal from the transducer with the central processing unit during the fastener tightening cycle at a fixed pressure value; and

setting a fluid flow signature based on the output signal received from the sensor and the received torque signal.

22. (Original) The method of claim 18, wherein the setup process further comprises the steps of:

receiving the output signal from the sensor during a free air run process with the central processing unit; and

setting a threshold value based on the received output signal.

23. (Original) The method of claim 18, wherein the setup process further comprises the steps of:

receiving the output signal from the sensor during a tightened fastener rehit cycle with the central processing unit; and

setting a threshold value based on the received output signal.

24. (Original) The method of claim 18, wherein the program further comprises the step of running a control program for each fastener tightening cycle to be performed.

25. (Original) The method of claim 24, wherein the control program further comprises the steps of:

receiving the output signal from the sensor during the fastener tightening cycle with the central processing unit;

comparing the output signal with bench marks stored in memory based on a previous fluid flow signature of an acceptable fastener tightening cycle; and

controlling fluid flow to the tool to be controlled based on results of the comparing step.

26. (Original) The method of claim 17, wherein the program further comprises the step of running an error proofing program for each fastener tightening cycle to be performed.

27. (Original) The method of claim 26, wherein the error proofing program further comprises the steps of:

receiving the output signal from the sensor during the fastener tightening cycle with the central processing unit;

comparing the output signal with bench marks stored in memory based on a previous fluid flow signature of an acceptable fastener tightening cycle; and

generating error proofing signals for the fastener tightening cycle based on the received output signal.

28. (Original) The method of claim 17 further comprising the step of:

supplying controlled fluid flow to the tool to be controlled through an output port and a standard fluid flow supply hose.

29. (Cancelled).

30. (Original) The method of claim 17, wherein the pressurized fluid is compressed air.

31. (Original) The method of claim 17 further comprising the step of:

operably connecting a switch to the central processing unit for running in a reverse cycle remote mode by electronically bypassing all internal metering for reverse cycle operation.

32. (Original) The method of claim 17 further comprising the step of:

operably connecting a transducer between the tool to be controlled and the fastener to be tightened; and

operably connecting an torque signal from the transducer to the central processing unit for running a setup process for a fastener tightening cycle to be learned.

33. (New) An apparatus for controlling an impact/pulse tool during a fastener tightening cycle comprising:

a port connectible to a supply of pressure regulated fluid;

a sensor for sensing a characteristic corresponding to flow of fluid to the tool to be controlled and for generating an output signal, wherein the characteristic corresponding to flow is at least one of differential pressure and acoustic data; and

a central processing unit for processing the received output signal from the sensor to control flow of fluid to the tool to be controlled.

34. (New) An apparatus for controlling an impact/pulse tool during a fastener tightening cycle comprising:

a port connectible to a supply of pressurized fluid regulated to a constant pressure;

means for monitoring a characteristic corresponding to flow of fluid to the tool to be controlled at the regulated constant fluid pressure; and

means for analyzing the monitored characteristic to determine tool process validity.

35. (New) The apparatus of claim 34, wherein the processing means further comprises means for comparing the monitored characteristic as a monitored fluid flow signature versus time to an acceptable fluid flow signature versus time.

36. (New) The apparatus of claim 34, wherein the characteristic corresponding to flow of fluid is at least one of differential pressure and acoustic data.

37. (New) In an apparatus for controlling an impact/pulse tool during a fastener tightening cycle, the tool connectible to a supply of fluid regulated to a constant pressure, the improvement comprising:

means for monitoring a characteristic corresponding to a fluid flow signature over a predetermined period of time for fluid supplied to the tool to be controlled; and

means for determining tool process validity based on the monitored fluid flow signature versus time.

38. (New) The apparatus of claim 37, wherein the determining means further comprises means for comparing the monitored fluid flow signature versus time to an acceptable fluid flow signature versus time to determine tool process validity.

39. (New) The apparatus of claim 37, wherein the characteristic corresponding to fluid flow signature is at least one of differential pressure and acoustic data.

40. (New) The apparatus of claim 37 further comprising:

a switch operably connected to the central processing unit for running in a reverse cycle remote mode by electronically bypassing all internal metering for reverse cycle operation.